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|-------------------------------|------------------------|---------------------|--|
| Notice of Allowability | Application No. | Applicant(s) | |
| | 10/759,078 | TUTTLE, MARK E. | |
| | Examiner | Art Unit | |
| | A. Dexter Tugbang | 3729 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to amendment filed on October 19, 2006.

2. The allowed claim(s) is/are 57-66,68-72 (renumbered as 1-15, respectively).

3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some* c) None of the:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

(a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) hereto or 2) to Paper No./Mail Date _____.

(b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of
Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3. Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
- 4. Examiner's Comment Regarding Requirement for Deposit
of Biological Material
- 5. Notice of Informal Patent Application
- 6. Interview Summary (PTO-413),
Paper No./Mail Date _____
- 7. Examiner's Amendment/Comment
- 8. Examiner's Statement of Reasons for Allowance
- 9. Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows.

This application is in condition for allowance except for the presence of Claims 73 through 79 and 92 through 102, directed to invention non-elected without traverse.

Accordingly, Claims 73 through 79 and 92 through 102 have been cancelled.

Reasons for Allowance

2. The following is an examiner's statement of reasons for allowance.

In addition to the applicant(s) remarks (pages 9-10 of the amendment filed on October 19, 2006), which are fully incorporated by reference herein, the examiner adds the following comments.

The prior art does not teach all of the limitations of the claimed invention including “forming a tunnel barrier layer within the *opening in contact with the first magnetic layer*; and forming a second magnetic layer over *and in contact with the tunnel barrier layer*” (last 4 lines of Claim 57, emphasis added).

In regards to the merits of JP'172 as applied in the last Office Action (Non-Final Rejection, mailed on July 28, 2006), the “first magnetic layer” was read as layer 210, the “tunnel barrier layer” was read as either layer 310 or layer 311 (in Fig. 1) and the “second magnetic layer” was read as layer 211. However, Claim 57 as now amended, requires

that the second magnetic layer be in *direct contact with the tunnel barrier layer*. Therefore, only layer 310 can be read as the tunnel barrier layer because it is direct contact with the first magnetic layer (e.g. 210). Layer 311 cannot be read as the tunnel barrier layer because it is not in direct contact with the first magnetic layer and because layer 310 is in-between layers 311 and 210. Accordingly, the second magnetic layer (e.g. 211) of JP'172 is not in direct contact with the tunnel barrier layer (e.g. 310) because layer 311 is between layers 211 and 310 and layer 311 cannot be read as the tunnel barrier layer. So the limitations of "forming...layer" (last 4 lines of Claim 57) are not met by JP'172.

Moreover, it would not be obvious to modify JP'172 by having the second magnetic layer directly contact the tunnel barrier layer because to do so would simply destroy the layered structure of JP'172 and would thus, destroy the overall invention of JP'172.

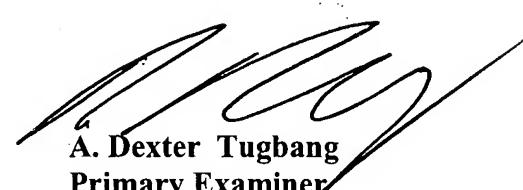
Accordingly, Claims 57 through 66 and 68 through 72 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570. The examiner can normally be reached on Monday - Friday 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



A. Dexter Tugbang
Primary Examiner
Art Unit 3729

January 31, 2007